

PHOTONICS spectra



Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue.

From the Editor's Desk



Integrated photonics, infinite possibilities

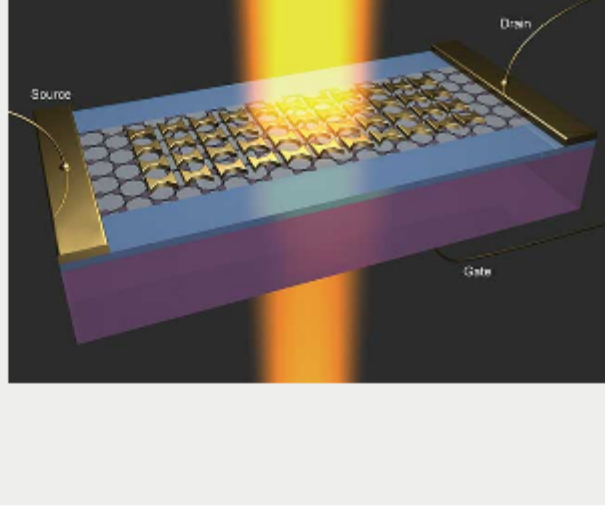
MIKE WHEELER, MANAGING EDITOR

Disruptive technologies such as self-driving cars, optical computers and ultrafast telecommunication networks all require one thing to come to fruition: more complex integrated photonic circuits. For that to happen, researchers must continue to push the limits of materials used to fabricate waveguides, filters, couplers and modulators found on the circuits.

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Simulation, Experiment Unite Graphene and Plasmonics

Simulation tools bring the complex physics of two-dimensional materials and plasmonics together in a way that could change the face of optoelectronic devices.

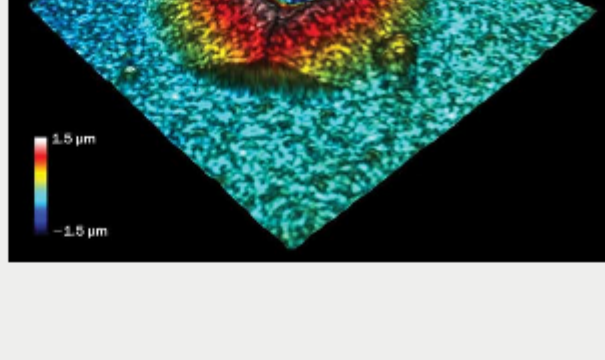


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Optical Metrology Breaks Barriers

At one time, the diffraction limit, half the wavelength of light, acted as a cutoff to optical measurement. That's no longer the case.

Superresolution techniques now allow optical metrology well below that point in the XY direction, while interferometry and other approaches produce precise optical measurement in the Z, or vertical, direction.



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In Case You Missed It

Breakthrough for Real-Time THz Imaging

Terahertz technologies have become a major field of applied research, driven by the tremendous potential of applications such as nondestructive testing, biomedical imaging, security screening and telecommunications. Imaging using THz radiation has garnered increasing attention, as it promises penetrating, contactless and submillimeter diffraction-limited imaging that is suitable for dry, nonpolar, nonmetallic materials such as plastics and ceramics.



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Display Technology Eliminates Need for 3D Glasses

A novel design for 3D display in a cinema setting makes 3D viewable at high resolution and without the need for special eyewear. The prototype design, dubbed Cinema 3D, allows viewers to experience the same 3D effects from any seat in the theater.

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Smart LED Bulbs Deliver Communication and Illumination

Consumer-grade LED light bulbs can be enhanced with basic light-receiving electronics to enable the sensing of incoming signals from other light-emitting devices. The enhanced light bulbs are powerful enough to establish a communication link across several meters between light bulbs and LED-only systems that can be integrated into many devices.

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Alluxa
FOR SO MANY REASONS

REASON #8:

ULTRA SERIES, FLAT TOP
NARROWBAND FILTERS
0.25 NM TO 2 NM BANDWIDTH
>90% TRANSMISSION
OD6 BLOCKING

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CIOE 2016
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Featured Products

Ultimate Infrared Handbook from FLIR

FLIR Systems Inc.
FLIR offers The Ultimate Resource Guide for Using Infrared in the R&D Industry. Though infrared radiation (IR) is not detectable by the human eye, an IR camera can convert it to a visual image that depicts thermal variations across an object or scene.

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LensCheck™ Quality Control

Optikos Corporation
Optikos, the leader in image quality test equipment, is pleased to offer this compact, efficient, easy-to-use quality control tool. The LensCheck™ Instrument is a cost-effective solution to your production and prototype lens qualification needs, and provides portable and precise measurements.

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Alluxa Ultra Series Filters

Alluxa
Alluxa Ultra Series Filters, including Narrowband, Dichroic, UV, IR, and Notch filters, provide the highest performance optical thin film solutions available today. For example, the Ultra Series Flat Top Narrowband filters offer the narrowest bandwidths and squarest filter profiles in the industry.

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Thin-Film Coatings

OptoSigma Corp.
For more than twenty years, OptoSigma has been at the forefront of the optical components industry, manufacturing thin-film coatings to precision standards. Sure, we have an impressive catalog offering, but we also excel at providing specialized manufacturing for custom orders.

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Advanced Energy® UltraVolt® HVA Series—Precision High Voltage Amplifier

Advanced Energy Industries Inc.
The HVA series of DC-to-DC high voltage power supplies operates a precision filter/divider and linear HV switch to produce a high voltage amplifier (HVA). These modules provide a high-resolution, programmable, high voltage DC to full-scale waveform capability greater than 1 kHz output.

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Precision Impedance Analyzer and LCR Meter

Zurich Instruments AG
With the launch of the 5 MHz MFA, Zurich Instruments is introducing a new type of impedance analyzer and precision LCR meter.

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Simplify Optomechanical Design

Zemax LLC, Optical & Illumination Design Software
Zemax introduces LensMechanix, powerful ray tracing software that revolutionizes optomechanical product development. Save time, save money, and improve efficiency by packaging, analyzing, and validating your mechanical designs.

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Ninox 640 - Cooled Visible SWIR InGaAs

Raptor Photonics Ltd.
Introducing Scientific SWIR! The Ninox-640 is a cooled, high sensitivity digital non-ITAR VIS-SWIR camera. Using a 640 x 512 InGaAs sensor the Ninox 640 enables high sensitivity imaging from 0.4µm to 1.7µm.

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UV/VIS/IR Custom Thin Film Coatings

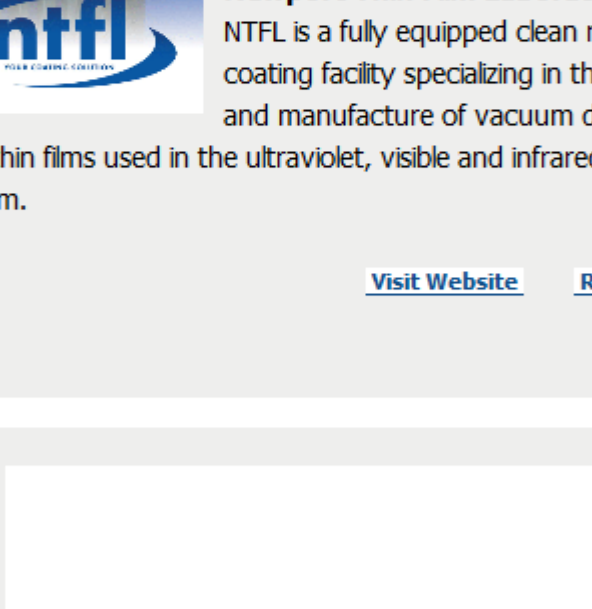
Newport Thin Film Laboratory Inc.
NTFL is a fully equipped clean room coating facility specializing in the design and manufacture of vacuum deposited optical thin films used in the ultraviolet, visible and infrared spectrum.

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UV-enhanced Silicon Photodetector

Electro-Optics Technology Inc.
For time domain and frequency response measurements, Electro-Optics Technology (EOT) has released the new ET-2070 Silicon UV-enhanced Photodetector featuring a 3ns rise time and fall time and a large active area of 2.55mm.

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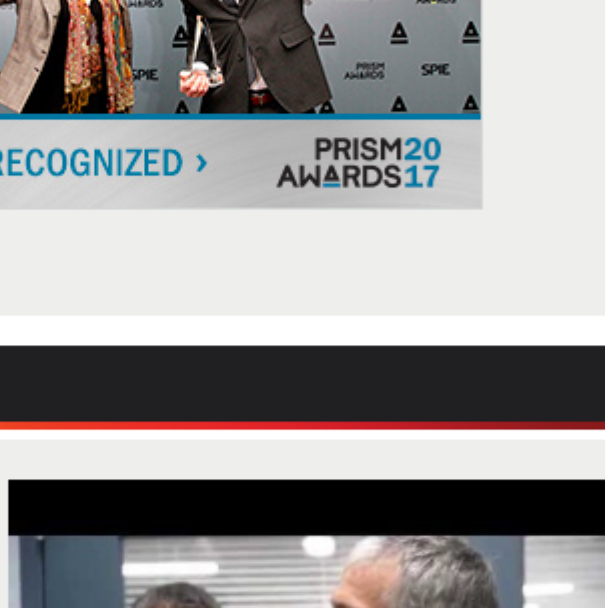
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Featured Video

Optimax: Customer Success & Employee Prosperity

Optimax achieves operational excellence by investing in cutting-edge technology, advancing its people, and sharing 25% of monthly profits with employees, but don't take our word on it, watch this video by the Hitachi Foundation that tells the Optimax story.

[Watch Now](#)



Webinars

Controlling Quality in Advanced Optics Manufacturing

Tue, Aug 23, 2016 12:00 PM - 1:00 PM EDT

John Davis of Particle Measuring Systems will provide an overview of particle generation sources, control methods and ISO standards, to help you achieve a clean environment that maximizes productivity. He will examine performance trends in the optics industry that are driving manufacturers to reduce contamination levels and will discuss how quality control can be compromised.

The advantages of continuous monitoring with laser particle counters will be discussed; and Davis will include multiple examples of particle excursions in the optics industry that have been found and fixed, illustrating the types of improvements that can be made through contamination control. John Davis is the Global Applications Engineering Manager at Particle Measuring Systems.

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Coming in September...

Features

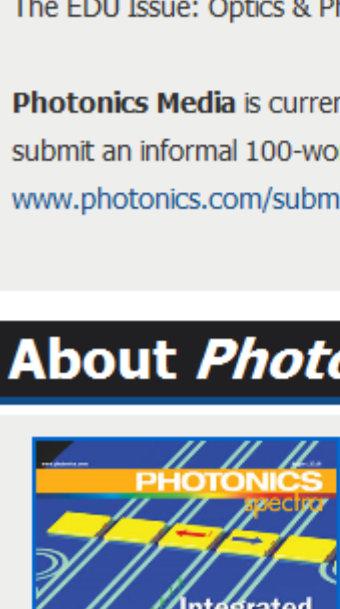
Lasers; Optical Communications; MEMS Displays; Image Sensor Advances; Positioning Systems

Issue Bonus

The EDU Issue: Optics & Photonics Education, A Global Report (with university directory and student distribution)

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *Photonics Spectra*. Please submit an informal 100-word abstract to Managing Editor Mike Wheeler at mike.wheeler@photonics.com or use our online submission form www.photonics.com/submitfeature.aspx.

About Photonics Spectra



Since 1967, *Photonics Spectra* magazine has defined the science and industry of photonics, providing both technical and practical information for every aspect of the global industry and promoting an international dialogue among the engineers, scientists and end users who develop, commercialize and buy photonics products.

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